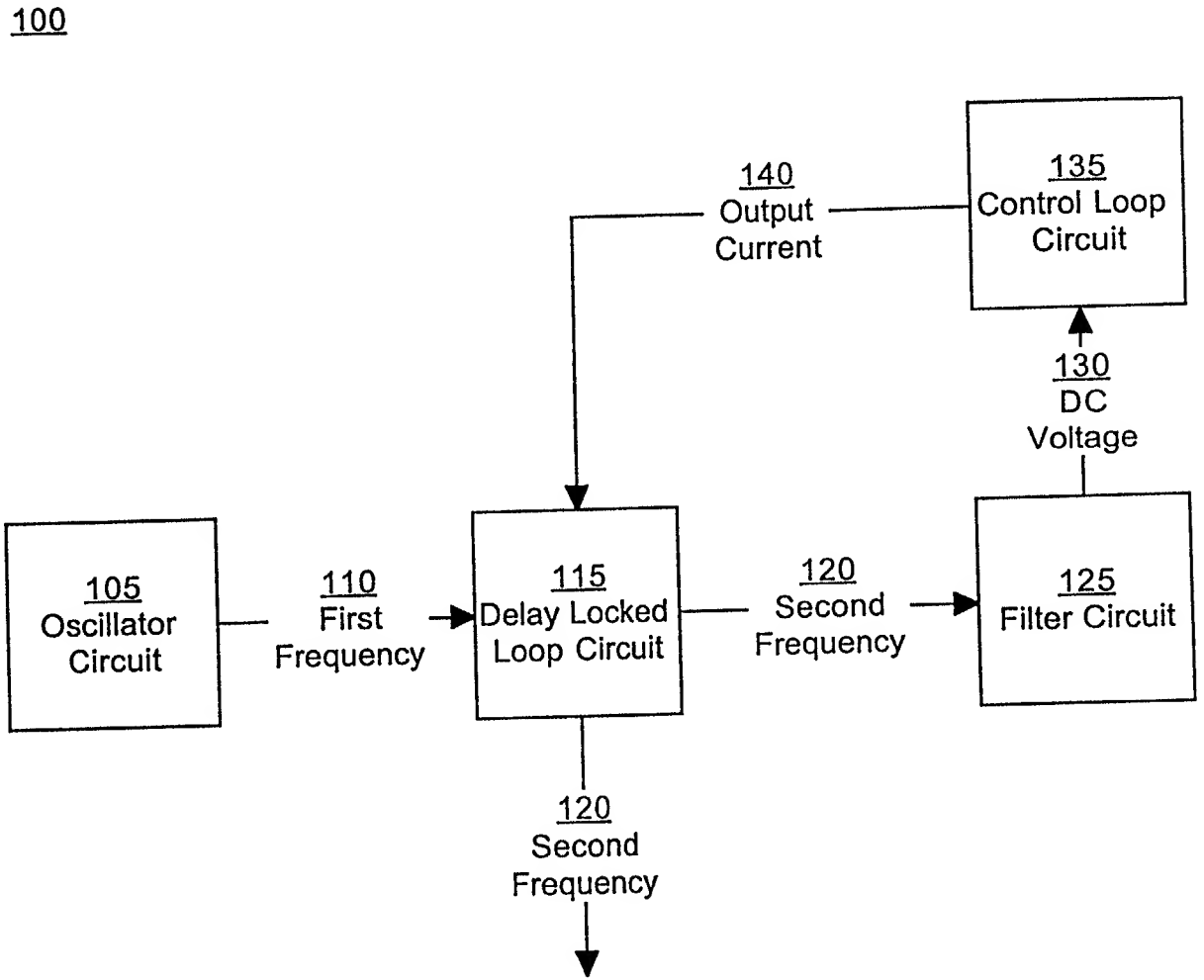
Figure 1


100
105
Oscillator
Circuit
110
First
Frequency
115
Delay Locked
Loop Circuit
120
Second
Frequency
125
Filter Circuit
120
Second
Frequency
130
DC
Voltage
135
Control Loop
Circuit
140
Output
Current

200

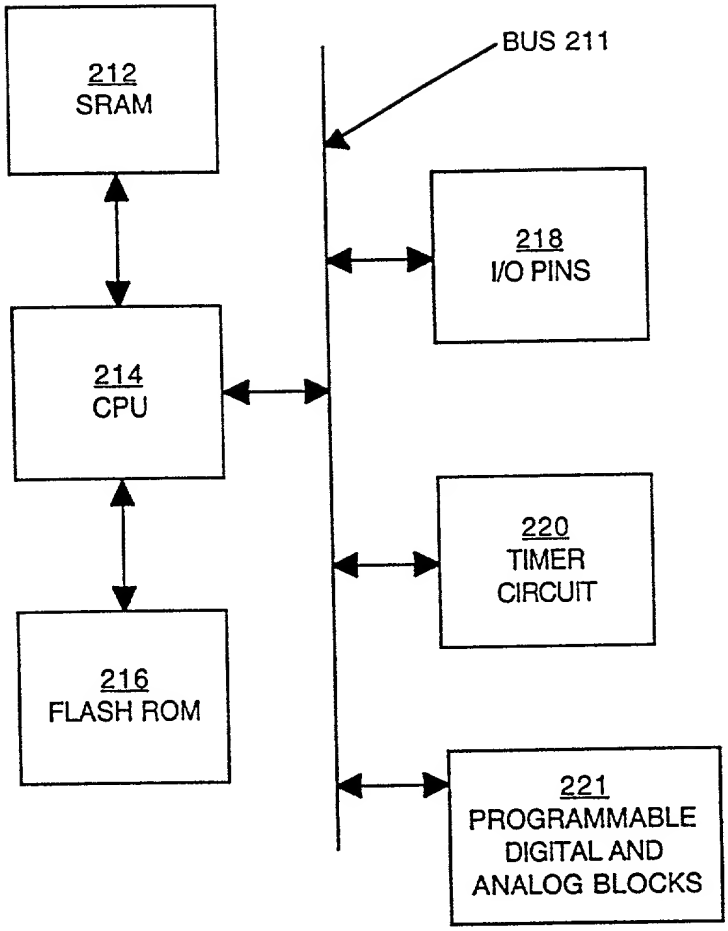

212
SRAM
BUS 211
218
I/O PINS
214
CPU
220
TIMER
CIRCUIT
216
FLASH ROM
221
PROGRAMMABLE
DIGITAL AND
ANALOG BLOCKS

Figure 2

Figure 3

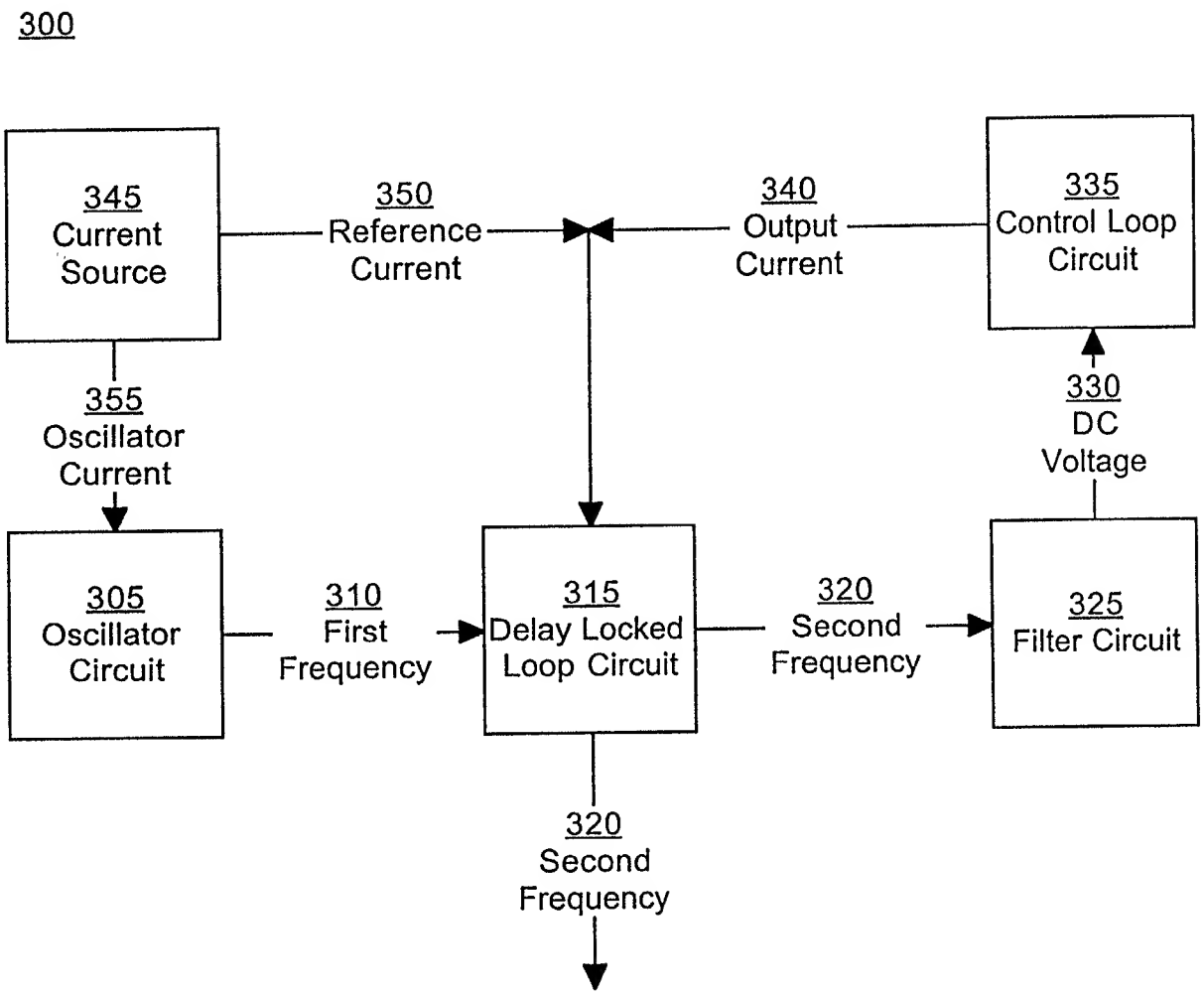

300
345
Current
Source
350
Reference
Current
340
Output
Current
335
Control Loop
Circuit
355
Oscillator
Current
330
DC
Voltage
305
Oscillator
Circuit
310
First
Frequency
315
Delay Locked
Loop Circuit
320
Second
Frequency
325
Filter Circuit
320
Second
Frequency

Figure 4

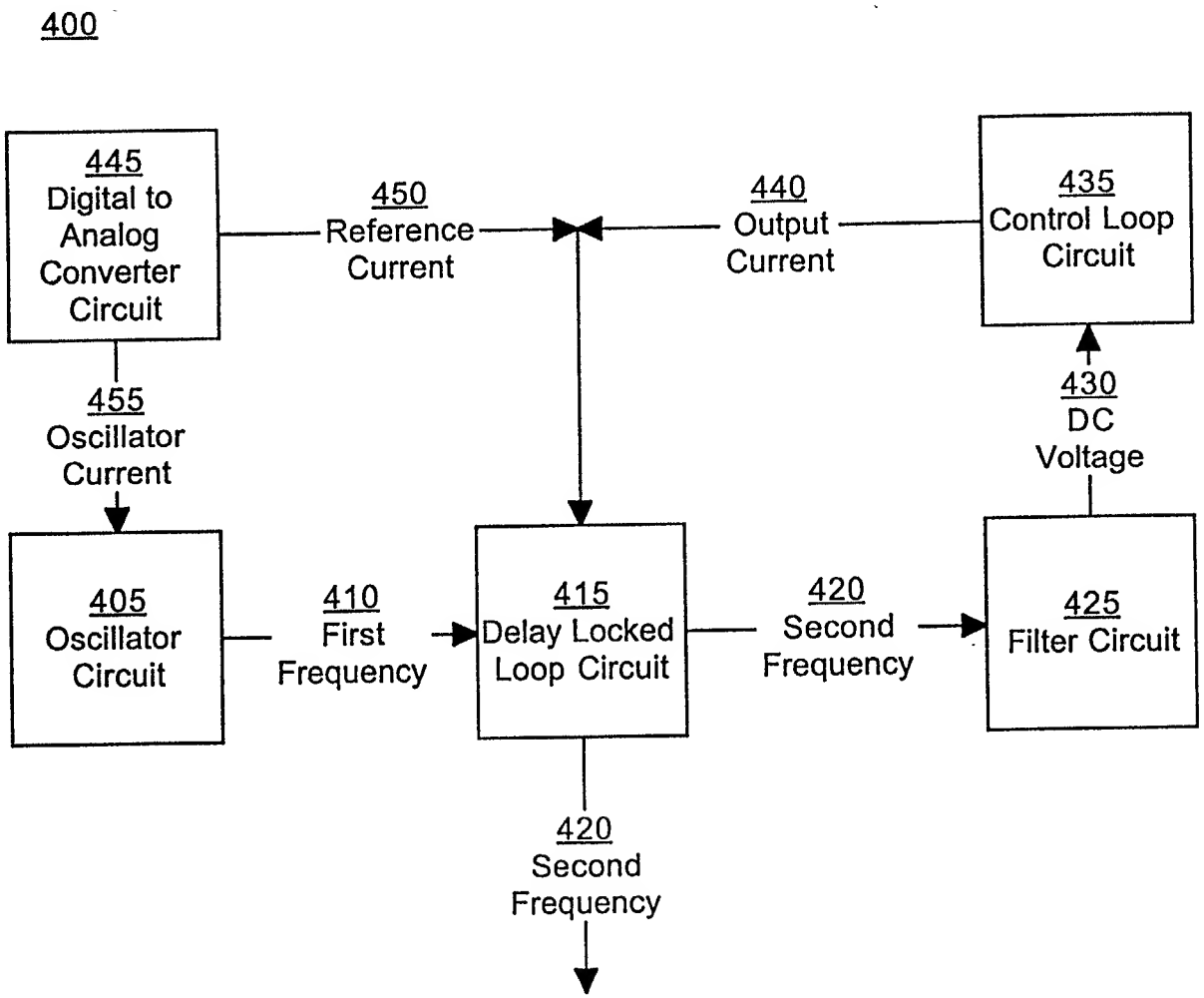

400
445
Digital to Analog Converter Circuit
450
Reference Current
440
Output Current
435
Control Loop Circuit
455
Oscillator Current
430
DC Voltage
405
Oscillator Circuit
410
First Frequency
415
Delay Locked Loop Circuit
420
Second Frequency
425
Filter Circuit
420
Second Frequency

Figure 5

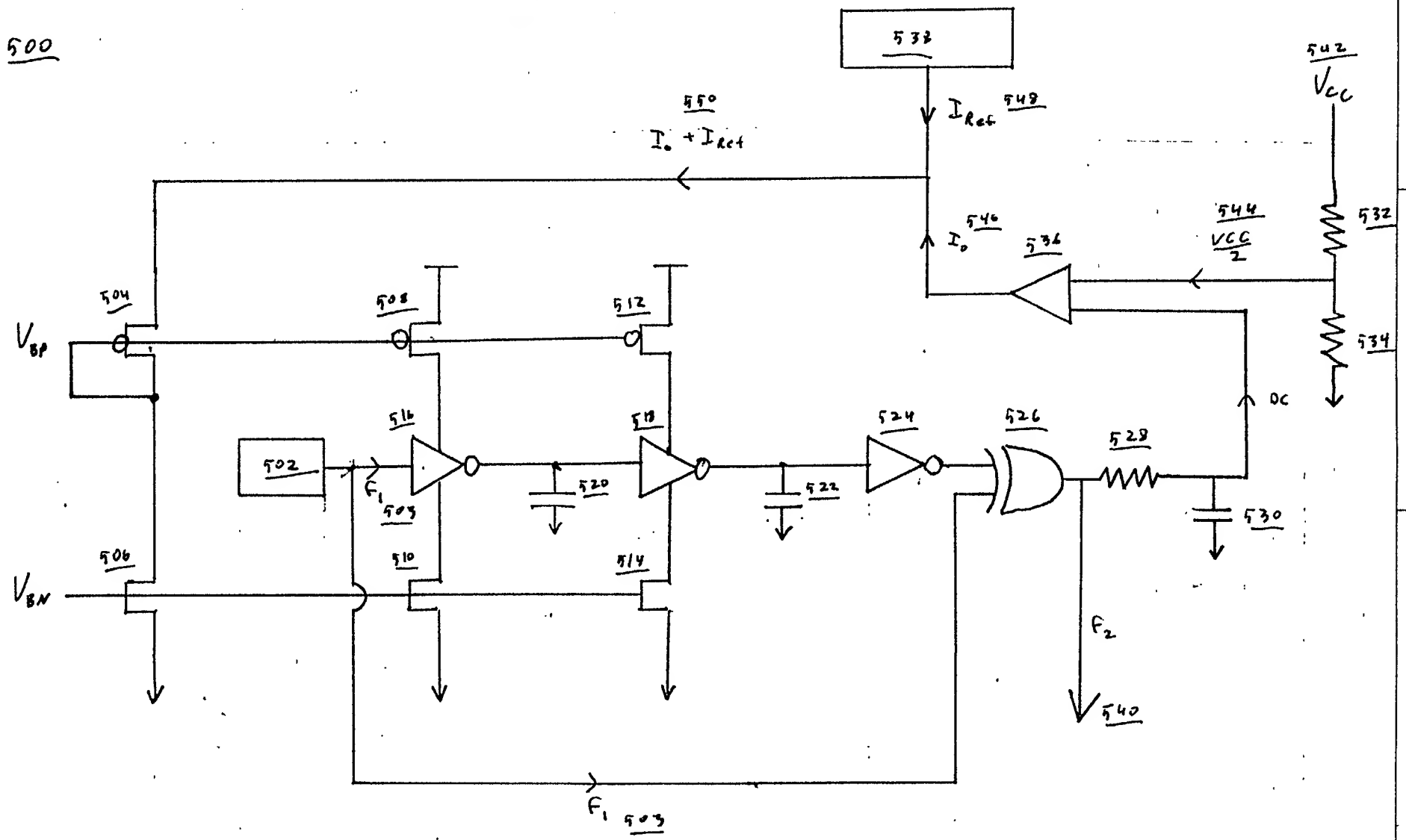

500
532
I_{Ref} 548
550
$I_o + I_{Ref}$
542
V_{CC}
546
I_o
536
544
$\frac{VCC}{2}$
532
534
504
508
512
V_{BP}
516
518
524
526
528
502
F_1 503
520
522
530
DC
506
510
514
V_{BN}
F_2
540
F_1 503

Figure 6

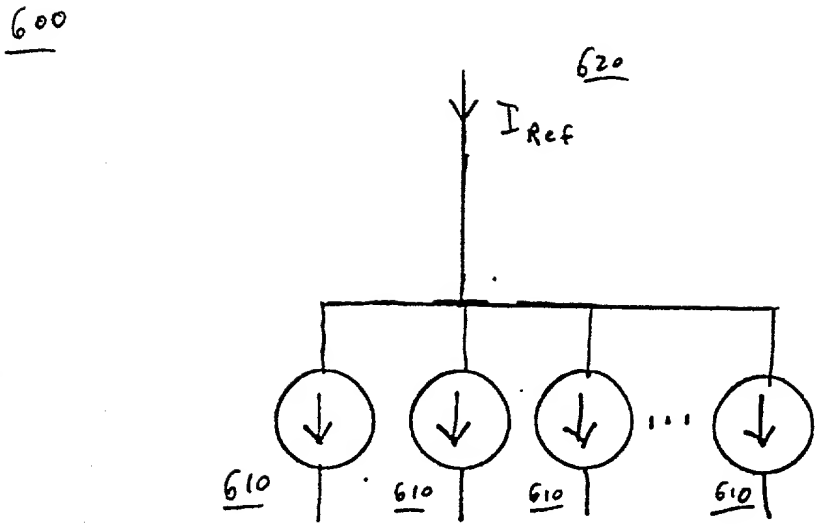
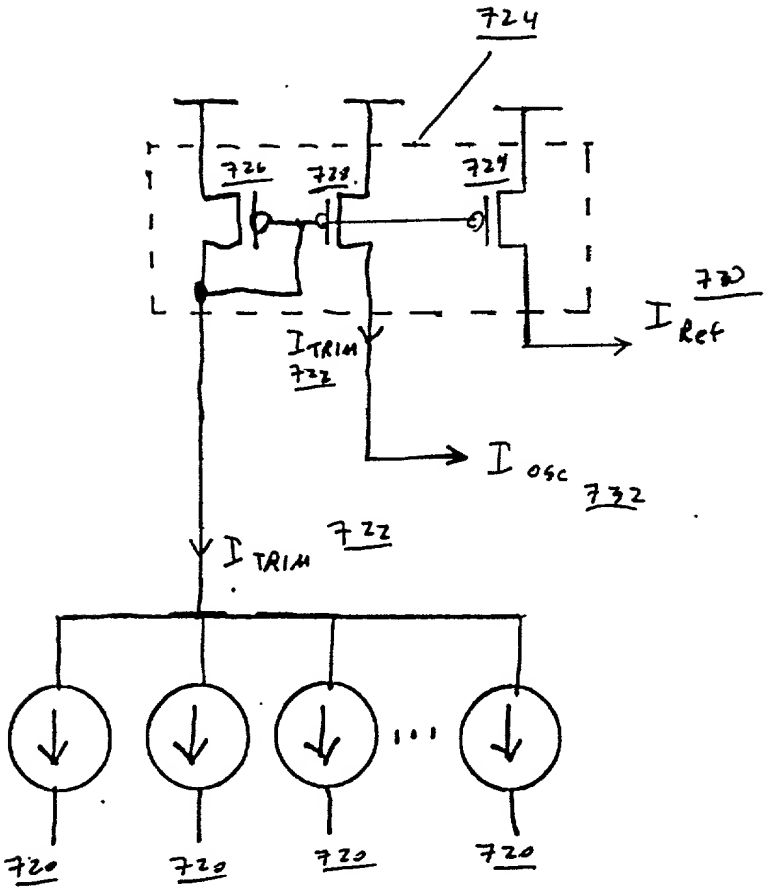


Figure 7


724
726
728
729
730
I_{Ref}
I_{TRIM}
732
I_{osc}
732
I_{TRIM}
722
720
720
720
720